



NOAA Office of Ocean Exploration Quick Look Report

Expedition Title: Lost City 2005

Results (please check all disciplines in which this cruise collected data)	Details (please describe any novel discoveries in the discipline, answers such as “possible, awaiting data analysis” and “no apparent discoveries” are acceptable)
Bathymetric Mapping <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Seabeam multibeam sonar system installed on the NOAA Ship Ronald H. Brown was used extensively to map the Atlantis Massif and Lost City Hydrothermal Field (LCHF), as well as the Western Massif, located further to the west along the Atlantis Fracture Zone.
New Species Discovered <input type="checkbox"/> Yes <input type="checkbox"/> No	Possibly, pending results of microbiological analyses.
Bio-prospecting <input type="checkbox"/> Yes <input type="checkbox"/> No	Many different species of deep sea fauna and invertebrates were collected by the ROVs and are currently being analyzed.
Habitat Range Extended <input type="checkbox"/> Yes <input type="checkbox"/> No	Possibly, pending results of macro- and microbiological analyses.
Chemical Processes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Fluid and gas samples were collected from active vent sites within the LCHF.
Geologic Processes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	By mapping the geologic formation on which LCHF sits, and by collecting a number of rock samples of both the host rock and vent structures, we'll be able to better constrain the age and evolution of LCHF.
Physical Processes <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Through the analysis of CTD and temperature probe data, we'll gain a better understanding of the physical processes at LCHF.
Sub/ROV/AUV Dives <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	The Hercules and Argus ROVs were used extensively during this expedition. The vehicles were the sole means for collecting the expedition's video, imagery, data, and samples.
New Technology <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	This expedition was the pilot expedition for testing telepresence technology as a means to conduct science from a remote location.
Maritime Cultural Heritage <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Outreach <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	During the Lost City expedition, there were over 40 live shows broadcasted to the Boys and Girls Club of America, Mystic Aquarium and several other museums and venues across the country. During each show, Dr. Ballard and Dr. Kelly fielded questions asked of them by the audiences.
Students Involved <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Several graduate students were present on the research vessel conducting and assisting in on-going research. A number of graduate students also participated via telepresence from the University of Rhode Island, University of Washington, and University of New Hampshire. In addition, K-12 students from across the country were involved through our outreach program that utilized the telepresence technology.
Multidisciplinary <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	This expedition involved oceanographers consisting primarily of biologists, geologists, chemists, and marine educators.
Exploration of New Regions <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	An ROV dive on the Western Massif was a first, as was exploration along new regions surrounding LCHF.